

AMENDMENTS TO THE CLAIMS

This listing of the claims replaces all prior listing and versions:

1. (currently amended): An immunogenic detoxified protein comprising the amino acid sequence of subunit A of a cholera toxin (CT-A) ~~or a fragment thereof~~ or the amino acid sequence of subunit A of an *Escherichia coli* heat labile toxin (LT-A) ~~or a fragment thereof~~ wherein the amino acids at, or in positions corresponding to, Ser-63 and Arg-192 of SEQ ID NO:7 or SEQ ID NO:8 are replaced with another amino acid, and further wherein the amino acid at or in a position corresponding to Ser-63 is replaced with Lys-63.
2. (currently amended): A vaccine composition comprising an immunogenic detoxified protein according to claim 1 2 and a pharmaceutically acceptable carrier.
3. (original): A vaccine composition according to claim 2 further comprising an adjuvant.
4. (currently amended): A vaccine composition according to claim 2 further comprising containing a second immunogenic antigen.
- 5 to 9. (canceled).
10. (original): A method of vaccinating a mammal against *Vibrio cholerae* or an entertoxygenic strain of *Escherichia coli* comprising administering an immunologically effective amount of an immunogenic detoxified protein according to claim 1.
11. (original): A method for the prevention or treatment of disease in a subject comprising administering to the subject an immunologically effective dose of a composition according to claim 4.
12. (currently amended): A process for the formulation of a vaccine according to claim 2 comprising bringing an immunogenic detoxified protein according to claim 1 into association with a pharmaceutically acceptable carrier.

13. (currently amended): ~~A The process according to claim 12, further for the formulation of a vaccine according to claim 3 comprising bringing the vaccine an immunogenic detoxified protein according to claim 1 into association with an adjuvant.~~

14. (currently amended): ~~A The process according to claim 12, further for the formulation of a vaccine according to claim 4 comprising bringing the vaccine an immunogenic detoxified protein according to claim 1 into association with a second antigen.~~

15. (new): The immunogenic detoxified protein of claim 1, wherein the protein comprises the amino acid sequence of subunit A of a cholera toxin (CT-A) or a fragment thereof.

16. (new): The immunogenic detoxified protein of claim 15, wherein the amino acid at, or in a position corresponding to, Arg-192 is replaced with Asn-192 or Gly-192.

17. (new): The immunogenic detoxified protein of claim 16, wherein the amino acid at, or in a position corresponding to, Arg-192 is replaced with Asn-192.

18. (new): The immunogenic detoxified protein of claim 16, wherein the amino acid at, or in a position corresponding to, Arg-192 is replaced with Gly-192.

19. (new): The immunogenic detoxified protein of claim 1, wherein the protein comprises the amino acid sequence of subunit A of an *Escherichi coli* heat labile toxin (LT-A).

20. (new): The immunogenic detoxified protein of claim 19, wherein the amino acid at, or in a position corresponding to, Arg-192 is replaced with Asn-192 or Gly-192.

21. (new): The immunogenic detoxified protein of claim 20, the amino acid at, or in a position corresponding to, Arg-192 is replaced with Asn-192.

22. (new): The immunogenic detoxified protein of claim 20, wherein the amino acid at, or in a position corresponding to, Arg-192 is replaced with Gly-192.

23. (new): The immunogenic detoxified protein of claim 2, wherein the detoxified protein has a toxicity of less than 0.01% of the naturally occurring toxin counterpart.

24. (new): The immunogenic detoxified protein of claim 15, further comprising at least one CT subunit B.

25. (new): The immunogenic detoxified protein of claim 19, further comprising at least one LT subunit B.